

Abstract

The present invention relates to plant cells and plants, which are genetically modified, wherein the genetic modification leads to the increase of the activity of a starch phosphorylating OK1 protein and a starch phosphorylating R1 protein in comparison with
5 corresponding wild type plant cells or wild type plants that have not been genetically modified. Furthermore, the present invention relates to means and methods for the manufacture of such plant cells and plants. Plant cells and plants of this type synthesise a modified starch. The present invention therefore also relates to the starch synthesised by
10 the plant cells and plants according to the invention, methods for the manufacture of this starch, and the manufacture of starch derivatives of this modified starch, as well as flours containing starches according to the invention.

Furthermore, the present invention relates to nucleic acid molecules and vectors containing sequences which code for an OK1 protein and an R1 protein, as well as host
15 cells which contain these nucleic acid molecules.